

IN THE CLAIMS:

1. (Amended) A method for assessing the performance of a hearing aid that includes an implantable actuator, comprising:

positioning a test device external to a patient having ~~the~~an implanted hearing aid that
includes an actuator, wherein the test device is separate from the hearing aid;

utilizing the test device to generate at least one predetermined test signal that is provided by
the test device to the hearing aid and to obtain at least one test measure of an electrical signal
passing through the actuator in response to the test signal; and

employing the at least one test measure to assess at least one performance parameter for~~of~~the
hearing aid.

2. (Amended) The method of Claim 1 wherein the employing step includes:

comparing the at least one test measure to a first predetermined range to assess a first
performance parameter, said first performance parameter being one of the operability of the hearing
aid and an interface between the hearing aid actuator and a component of an auditory system of the
patient.

3. (Amended) The method of Claim 2, further comprising:

providing an output indicative of the first performance parameter.

4. (Amended) The method of Claim 2 wherein the employing step includes:

comparing the at least one test measure to a second predetermined range to assess a second
performance parameter, said second performance parameter being the other one of the operability of
the hearing aid and an interface between the hearing aid actuator and a component of an auditory
system of the patient, wherein the second predetermined range is at least partially non-overlapping
with the first predetermined range.

5. (Amended) The method of Claim 4, further comprising:

providing an output indicative of the second performance parameter.

6. Cancelled

7. (Amended) The method of Claim 42, further comprising:

providing a plurality of predetermined test signals for use in generatingcausing a corresponding plurality of electrical signals passing through the actuator, wherein the plurality of predetermined test signals includeare at a corresponding plurality of different frequencies distributed across a predetermined frequency range.

8. (Amended) The method of Claim 7, wherein the utilizing step includes:

utilizing the test device to obtain a plurality of test measures corresponding to the plurality of electrical signals passing through the actuator.

9. (Amended) The method of Claim 8, wherein the employing step includes:

identifying a resonant frequency of the actuator using the plurality of test measures.

10. (Amended) The method of Claim 62, wherein the at least one predetermined test signal has a frequency within a predetermined range of a resonant frequency of the actuator.

11. (Amended) The method of Claim 62, wherein the utilizing step includes:

selectively interconnecting the test device to an external transmitter of the hearing aid;

transmitting the at least one predetermined test signal from the test device to the external transmitter; and

inductively coupling the at least one test signal between anthe external transmitter and a subcutaneous coil of the hearing aid, wherein the subcutaneous coil provides the electrical signal to the actuator.

12. (Amended) The method of Claim 62, wherein the utilizing step includes:

transmitting the at least one predetermined test signal to a speaker located external to the patient, wherein the at least one predetermined test signal is acoustically provided by the speaker
patient, wherein the at least one predetermined test signal is acoustically provided by the
speaker providing the at least one test signal to an implanted microphone of the hearing aid, wherein
the implanted microphone provides the electrical signal to the actuator.

13. Cancelled

14. Cancelled

15. (Amended) The method of Claim 42, further comprising:

responsive to determining a determination that the interface between the actuator and the component of the auditory system is undesirable, repositioning the actuator to achieve a desirable interface.

16. (Original) The method of Claim 15 wherein the repositioning step includes:

providing an electrical input to a positioning system to selectively position the actuator relative to the component of the auditory system.

17. (Original) The method of Claim 16 wherein the step of providing the electrical input comprises:

providing a wireless signal to the positioning system from a position external to the patient.

18. (Original) The method of Claim 16 wherein the step of providing the electrical input comprises:

inductively coupling the electrical input to the positioning system.

19-36. Cancelled

37. (New) A system for assessing the performance of a hearing aid that includes an
implanted hearing aid actuator, comprising:

a test device, separate from and positionable external to a patient having an implanted hearing aid that includes a hearing aid actuator, including:

a signal generator to generate test signal at a predetermined frequency, wherein the hearing aid passes at least one electrical signal through the hearing aid actuator in response to said at least one predetermined test signal; and

a measurement device for obtaining at least one test measure of said electrical signal passing through said hearing aid actuator; and,

a signal processing unit to process said at least one test measure and provide an output usable to assess the performance of the hearing aid.

38. (New) The system of Claim 37, wherein the signal processing unit is configured to compare the at least one test measure to a first predetermined range to assess a first performance parameter, said first performance parameter being one of the operability of the hearing aid and an interface between the hearing aid actuator and a component of an auditory system of the patient.

39. (New) The system of Claim 38, further comprising:

a user interface to provide a first output, wherein the first output is indicative of the first performance parameter.

40. (New) The system of Claim 38, wherein the signal processing unit is configured to compare the at least one test measure to a second predetermined range to assess a second performance parameter, said second performance parameter being the other one of said operability of the hearing aid and the interface between the hearing aid actuator and a component of an auditory system of the patient, wherein the second predetermined range is at least partially non-overlapping with the first predetermined range.

41. (New) The system of Claim 40, wherein the user interface provides a second output indicative of the second performance parameter.

42. (New) The system of Claim 37, wherein the at least one predetermined test signal has a frequency within a predetermined range of a resident frequency of the actuator.

43. (New) The system of Claim 37, wherein the signal generator is configured to generate a plurality of predetermined test signals for use in causing a corresponding plurality of electrical signals to pass through the hearing aid actuator, wherein the plurality of predetermined test signals are at a corresponding plurality of different frequencies distributed across the predetermined frequency range.

44. (New) The system of Claim 43, wherein the measurement device is configured to obtain a plurality of test measures corresponding to the plurality of electrical signals passing through the hearing aid actuator.

45. (New) The system of Claim 37, wherein the signal generator comprises:
an oscillator for generating the at least one predetermined test signal;
a test control processor to set the oscillator to generate the at least one predetermined test signal; and,
a reference transmitter to provide the at least one predetermined test signal to one of a speaker and an external transmitter of the hearing aid.